

REMARKS/ARGUMENTS

I. Claim Status

Claim 1 has been amended to recite a belt presenting V-ribs made of a single elastomer material. Support for this amendment is found on page 9, lines 4 – 14. Claim 1 has also been amended by removing the phrase “in particular” and to clarify the shape of the belt. Claims 3, 7, and 9 have all been amended by removing the phrases “more particularly in the range of ...” for each claim.

Applicant has also added new Claim Numbers 15-17. Claim 15 recites a belt wherein the range of curvature lies in the range 1.15 mm to 1.25 mm. Claim 16 recites a belt wherein the length ℓ lies substantially in the range 1.08 mm to 1.36 mm. Claim 17 recites a belt wherein the height H of the ribs lies in the range 2 mm to 2.2 mm. Support for these claims is found in original claims 3, 7, and 9, respectively.

II. The Invention

As currently claimed, the invention is a power transmission belt for a motor vehicle and presenting V-ribs made of a single elastomer material and having flat side faces and rounded ridges, wherein said ridges present a convex curvilinear profile having a mean radius of curvature greater than 1 mm and less than or equal to 1.5 mm. Applicants have identified the problem of free zone swelling deformation, which leads to cracking, and how to remedy the problem. Accordingly, the claimed belt allows an improved behavior of a belt faced with flexing phenomena while also improving the behavior relative to swelling that generates cracking at the ridges of the belt. This result, which was not obtained prior to the claimed invention, extends the lifetime of a belt.

III. Rejections under 35 USC §112, Second Paragraph

Claim 1-14 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regards as the invention. Specifically, independent Claim 1 stand rejected for being indefinite because it is unclear whether the limitations following the phrase "in particular" are part of the claimed invention or merely a reference to certain limitations not claimed and the phrase "at least V-ribs" because it appears to potentially refer to other similar shaped belts. Additionally, Claims 3, 7, and 9 stand rejected for reciting a broad range and a narrower range together.

In response, Claim 1 has been amended by removing the phrase "in particular" and by removing the phrase "at least." Claim 3 has been amended to remove the phrase "more particularly in the range 1.15 mm to 1.25 mm." Claim 7 has been amended to remove the phrase "more particularly in the range 1.08 mm to 1.36 mm." Claim 9 has been amended to remove the phrase "more particularly in the range 2 mm to 2.2 mm."

As discussed above, the foregoing claim amendments have corrected the claim language to more particularly point out and distinctly claim the subject matter of the claimed invention. Accordingly, Applicants submit that the indefinite rejections of these claims have been obviated and should be withdrawn.

III. Rejections under 35 USC §103(a)

A) Rejections Under Kitahama

Claims 1-12 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kitahama et al. (US Patent No. 4,904,232) hereinafter "Kitahama." As currently claimed, independent Claim 1 recites a power transmission belt for a motor vehicle and presenting V-ribs made of a single elastomer material and having flat side faces and rounded ridges, wherein said ridges

present a convex curvilinear profile having a mean radius of curvature greater than 1 mm and less than or equal to 1.5 mm. Claims 2-12 are dependent upon Claim 1.

To establish a *prima facie* case of obviousness there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Additionally, the prior art references must teach or suggest all claim limitations. Furthermore, the teaching or suggestion to make the claimed invention must be found in the prior art, not in applicant's disclosure. Accordingly, a *prima facie* case of obviousness has not been proved because the references cited do not teach or suggest each and every claimed limitation nor demonstrates any suggestion to modify or combine the prior art in the manner suggested by the Examiner.

The Prior Art Does Not Teach All of the Claimed Limitations

Kitahama fails to teach or suggest each and every element of independent Claim 1. Claim 1 recites a power transmission belt for a motor vehicle and presenting V-ribs made of a single elastomer material and having flat side faces and rounded ridges, wherein said ridges present a convex curvilinear profile having a mean radius of curvature greater than 1 mm and less than or equal to 1.5 mm .

Instead, Kitahama teaches a power transmission belt with "each rib having an outer portion [16] formed of a first rubber material and defining inwardly converging ... and an inner portion [17] formed of a second rubber having a hardness less than the hardness of the outer portion..." See Column 1, lines 46-51; See also Figure 1. As such, Kitahama does not teach or suggest a power transmission belt for a motor vehicle made of a single elastomer material.

Additionally, Kitahama teaches clearly teaches a belt including ribs (15) each with a rounded tip surface (23). See Figures 1 and 2. It is respectfully submitted that the rounded tip teachings of Kitahama have been misapplied to the rounded ridge teachings of the claimed invention. The entire focus of the Kitahama reference is directed to the geometry of the inner portion (17) and how it interconnects with the outer portion (16). It should be pointed out that inner portion (17) and thus the rounded tip surface (23) of Kitahama is the "narrow" end of each rib (15). Furthermore, Kitahama is completely silent regarding the geometry of the ridges

located between the “wide” ends of each individual rib (15). Unlike Kitahama, the claimed radius or curvature recited in independent Claim 1 is directed to the ridges (or “valleys”) located between the “wide” ends of the individual ribs. As such, Kitahama does not teach or suggest a power transmission belt for a motor vehicle with rounded ridges having a mean radius of curvature greater than 1 mm and less than or equal to 1.5 mm.

There Is No Suggestion or Motivation to Modify Kitahama

The Examiner has failed to offer any support that the prior art, including the knowledge generally available to one of ordinary skill in the art, provides any suggestion or motivation to modify the belt of Kitahama to achieve the currently claimed invention. Specifically, the obviousness rejection offers mere conclusions to indicate why one of ordinary skill in the art would seek to modify the Kitahama belt. Conclusory statements are insufficient to establish a prima facie case of obviousness. Kitahama fails to provide any suggestion to modify the belt described in Kitahama as suggested by the Examiner. The only possible source for modifying Kitahama comes from Applicants’ own disclosure, which is impermissible. Thus, there is no motivation to modify Kitahama in the manner as currently claimed.

Kitahama teaches a ribbed belt including inner and outer portions made from different materials. Specifically, Kitahama teaches that “It is preferred that the difference between the hardness of the two portions 16 and 17 be at least 5° Shore A.” Clearly, Kitahama stresses the importance and desirability of using different materials of construction for the inner and outer portions. Furthermore, Kitahama provides more guidance in how one skilled in the art should select the different materials of construction according to their relative difference in hardness. As such, one skilled in the art would not be motivated by the teachings of Kitahama to construct a belt for such purposes from only one material of construction. In fact, one skilled in the art would be incited to steer away from using only one material of construction.

As mentioned above, Kitahama is completely silent regarding ridge geometry. Accordingly, Kitahama necessarily fails to provide any teaching or suggestion to modify the art to achieve a belt with ridges having a mean radius of curvature greater than 1 mm and less than or equal to 1.5 mm.

In view of the foregoing remarks, it is respectfully submitted that the rejections of Claims 1-12 under 35 USC §103(a) have been overcome.

B) Rejections Under Kitahama in view of Waugh.

Claims 13-14 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kitahama in view of Waugh (US Patent No. 4,011,766) hereinafter "Waugh." Claims 12-13 are dependent upon Claim 1. Independent Claim 1 has been amended to recite a power transmission belt for a motor vehicle and presenting V-ribs made of a single elastomer material and having flat side faces and rounded ridges, wherein said ridges present a convex curvilinear profile having a mean radius of curvature greater than 1 mm and less than or equal to 1.5 mm. Accordingly, dependent Claims 13-14 also currently recite these elements.

In general, Waugh is directed to an endless power transmission belt made from a plurality of elastomeric materials. See Column 2, lines 56-57. Waugh teaches a belt consisting of several belt elements interconnected by a tie band. Furthermore, the teeth of each belt element are staggered relative to the adjacent element. Waugh does not provide any guidance as to the radius of curvature of the ridges between individual teeth.

Similar to Kitahama, Waugh fails to teach every element of the currently claimed invention. Specifically, Waugh fails to teach or suggest a power transmission belt for a motor vehicle including V-ribs made of a single elastomer material and having flat side faces and rounded ridges, wherein said ridges present a convex curvilinear profile having a mean radius of curvature greater than 1 mm and less than or equal to 1.5 mm. Like Kitahama, Waugh provides no guidance on how to construct a belt as currently claimed. As such, Waugh does not teach or suggest each and every element of currently amended Claim 1 or any claims dependent thereon.

For these and the other reasons stated above, it is respectfully submitted that the rejections of Claims 13-14 under 35 U.S.C. §103 (a) have been overcome

IV. Conclusion

In view of the remarks made above, Applicant submits that the pending Claims are in condition for allowance. Applicant respectfully requests that the claims be allowed to issue. If the Examiner wishes to discuss the application or the comments herein, the Examiner is urged to contact the undersigned.

It is not believed that extensions of time or fees for net addition of claims are required, beyond those that may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 CFR § 1.136(a), and any fee required therefore (including fees for net addition of claims) is hereby authorized to be charged to Deposit Account No. 16-0605.

Respectfully submitted,



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